

Introduction to RAL3-LFRic

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The key aim of the RAL3-LFRic project is to deliver an LFRic-based RAL3 research configuration as a well-tested and understood baseline for future developments. This project is part of the Next Generation Modelling System (NGMS) programme and combines the new next generation atmospheric model (LFRic) infrastructure with the latest science configuration developed for regional modelling applications known as Regional Atmosphere and Land 3 (RAL3).

Significant technical development work over the past year has enabled regional configurations of the Unified Model and LFRic to be run side-by-side within a single workflow. Much of the initial focus has been on enabling stable LFRic simulations for UK regional domains.

In this progress update, I will present the current status of the workflow development and ancillary file generation and a few initial results from deterministic and ensemble case studies over the U.K. utilizing RAL3-LFRic. Case studies have been selected to span a variety of different weather conditions, including high-impact weather events. I will also outline future project plans and milestones. Normal text style should be used for all body text of the document. Arial 11pt.